



JULY 1983

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Well folks we are back from VACATION and ready to go at it again. First off **HAPPY FOURTH...**

??
From Jim Anderson
 Is there a program available for plotting and displaying lines
 as X & Y axes???

I assume that you want a program to PLOT lines in HI RES. well I don't have one right now but I will put out a call to the members for one.

HELP HELP HELP HELP HELP HELP HELP

That is not to dramatic is it!

Here is a simple program sent in by Chuck Clancy for plotting, maybe you can get some ideas from this.

```
2 POKÉ 24576,30:CALL17046:COLOR=0:SHAPE=15
10POKE40960,3:POKE40961,128:INPUT"X=",X
13CALL17046
14Y=X^2:PLOTX,Y:Y=X+1:GOTO14
Input values for X of .1 to 9....
```

!!
To give credit where is credit is
 due, we left off the name of the programmer for the TOWERS OF HANOI in the JUNE letter. It was written by **DON SCHMIDT** and is a very good program and lots of fun to play. Little things like that happen when you are trying get ready for vacation and finish a Newsletter also. This also gives us a chance to mention that when programs are submitted if they are on TAPE it sure makes it a lot easier. I do not know for my typing ability.
 Thanks for the program **DON**. EDITOR.

From BILL BOWMAN

1. Do I have a problem with my computer? The following will not print anything until I=14 then it will not print all of the ABC II characters.

```
10 A=0:FOR I = 0 TO 63
20 PRINT I,CHR$(A+I):NEXT
```

No you don't have a problem with your machine. It did just what it was supposed to do. To explain WHY first I will have to give you a breakdown of the ABC II characters.

0 to 31 = These characters are primarily control characters and are used in such things as PRINTERS AND COMMUNICATION devices.

32 to 95 = These are all of the characters that the IM-1 uses. This covers the special (!"#\$%&'()*.,?/+;:), <NUMERIC and ALPHA characters.

96 to 126 = These would be your Lower Case and a few more special characters. These are not displayable on the IM-1 but can be used on a printer if you have one.

So if you will change line #10 to A=0:FOR I = 32 TO 95 YOU WILL get all of the characters printed. If you go all the way to 126 it will just repeat the ALPHAS.

2. Please explain line # 3090 PRINT=1:PRINT CHR*(27);"P"
from the LEDGER program in the MAY issue. Also line # 3150
PRINT=0.

The above lines would only be used if you have a printer. The first line turns on the printer and sets it to compressed print mode. The other line turns off the printer.

3. Could the dampness in the air be causing my keyboard to have multiple keyings?

I don't think that it does. This is a common problem with mechanical type keyswitches. I have had some luck with putting some very light oil around the shaft in the keyswitch. Just be careful to not overdue it.

From ROBERT GARDNER Jr.
Does the LEDGER program in the MAY issue have to be run on a DISK system?

No, you can use it on a tape system just as well. The only thing you have to remember is to use a GOTO instead of RUN when you start the program after loading it from TAPE. This will keep it from destroying your data. Here are the steps to do it.

1. Keyin 1 CLOAD and hit Return
2. Keyin RUN and hit Return
3. After it loads use GOTO 1 to start.

Hey you HAMS out there!!!!
From Edward J Fairbairn

He has some Amateur Radio Software for the IM-1 available.
Here is his address so you can write for information and cost.
Edward J Fairbairn
7601 12th Ave So
Richfield, MN 55423

BASIC BOX BASIC BOX BASIC BOX BASIC BOX BASIC BOX BASIC BOX BASIC BOX BASIC BOX BASIC BOX

This month I am going to try and clear up some of the confusion about the READ, DATA & RESTORE commands.

First a little descriptions:

1. DATA=This command is used to store permanent data in the program. The only way to change or modify this is to stop the program and rekey the data. It is recommended that the DATA statements be put at the end of the program.
2. READ= This command is used to retrieve the data from the DATA statement.
3. RESTORE=This command allows the Computer to READ the same Data more than once.

Here are 2 programs showing 2 different ways to do the something.

```
100 DIM NAMES(5,10),AGE(5)
110 FOR I = 1 TO 5:READ NAMES(I,1):NEXT I
140 FOR I = 1 TO 5:READ AGE(I):NEXT I
170 FOR I = 1 TO 5:PRINT NAMES(I,1),AGE(I):NEXT I
200 STOP
210 DATA JAMES,ALEX,KELLEY,DAMON,MILLY
220 DATA 3,4,99,8,60
230 END
```

```
100 DIM NAMES(5,10),AGE(5)
110 FOR I = 1 TO 5:READ NAMES(I,1),AGE(I):NEXT I
140 FOR I = 1 TO 5:PRINT NAMES(I,1),AGE(I):NEXT I
150 STOP
160 DATA JAMES,3,ALEX,4,KELLEY,99,DAMON,8,MILLY,60
170 END
```

XXX
 Somemore from LOUIS BOLDUC

BASIC SEQUENTIAL AND DIRECT ACCESS FILE MANAGEMENT.....

When you open a file, here's what's going on:

- 1-The computer looks up in the Directory, and checks if the file already exist, if the file exists, it goes back to BASIC, otherwise, it will create it following the same algorithm as if it was saving a program, except it won't save anything.....
- 2-In sequential access, the record pointer is set to 0.

SEQUENTIAL ACCESS

When you PRINT #n:variables , here's what's going on:

- 1-Every time a PRINT is executed, the following algorithm is performed: it reads the FSAT and gets the sector and track indicated by the record pointer.
- 2-It goes back in the FAT and resets the sector, then the computer looks for the first available sector. It goes back in the FSAT and prints in it the new sector at the byte indicated by the record pointer, the record pointer is incremented and the variables are printed on the sector indicated by the old value of the record pointer.

When you READ #n:variables , here's what's going on:

- 1-The FSAT is read to get the sector and track indicated by the record pointer.
- 2-The sector is read and the record pointer is incremented.

DIRECT ACCESS

In Direct Access, the algorithm is exactly the same as the sequential access (unlike most DOS) except that the record pointer is given in the PRINT and READ statement and it is not incremented.

Example of read statement: READ #n,Z:variables
 If the FSAT contains 00 08 00 00 07 00 06 00 05 01 0B..
 then the sector 5 on track 0 will be read....

From EDWARD J FAIRBAIN

He sent in an explanation for the recursive programming and I thought some of you would be interested also.

Recursive programming is the method by which a routine will continue to call itself until a specific minimum requirement is met. A good example of recursion is the T.V. commercial where you are shown a picture of a television, which in turn is showing a picture of a television, which in turn is showing a picture of a television, etc. In programming it is where you have a routine into which you plug your initial values. The routine then performs a function on the values you have input. It substitutes the calculated result for the original values, and then calls itself, using the newly computed values. This then continues until all the requirements for leaving the routine are met.

Thanks Edward

Edward

 YOU MIGHT NOTICE THAT THIS MONTH I HAVE PRINTED ALL OF THE PROGRAMS
 in larger print. it was too hard to make out what was printed on the
 other.

```

POKE 8193,60: POKE 26112,0:V=S12:I=0:K=0:M=42296
4 CALL 17846: POKE 623,94:K=K+I:I=-1
3 I=I+1:0=32: POKE V+1,239
4 A= ASC (KEYS (0)): IF A=0 THEN 4
5 CALL 17886: IF A=4 THEN 20
6 IF A=1 THEN 0=0: GOTO 4
7 IF A=0 THEN POKE V+I,32:I=I-2: GOTO 3
9 POKE V+1,A: IF A<91 IF A>64 THEN POKE M+K+I,A+8: IF 0=32 THEN POKE V+I,A-64
: GOTO 3
18 POKE M+K+I,A: IF A<>13 THEN 3
22 POKE M+K+I,11:I=I+1: POKE M+K+I,13: GOTO 2
28 FOR 0=0 TO K+I: POKE 25601,PEEK (M+0): NEXT : GOTO 2
30 REM "HERE IS A NICE PROGRAM SENT IN BY JOHN M GIPSON"
35 REM "WITH THIS PROGRAM YOU CAN CREATE PRINTED MATTER ON AN EPSON MX-80
40 REM "WITH YOU IM-1".
50 REM "BEFORE RUNNING DELETE ALL LINES FROM 30 ON".....
55 REM "THIS PROGRAM WILL DEMONSTRATE POKE TO THE RS-232. THE
60 REM "PROGRAM PERMITS LOWER CASE LETTERS AS WELL AS ALLONS
65 REM "YOU TO SEE ON THE SCREEN A CAPITALIZED LETTER AS A
70 REM "REVERSED VIDEO CHARACTER."
75 REM "TO CAPITALIZE PRESS THE (CTRL) KEY BEFORE THE LETTER.
80 REM "THE (ESC) KEY CAN BE USED TO CONTROL THE PRINTER.
85 REM "AN ARROW POINTS TO THE END OF A 80 CHARACTER LINE AND
90 REM "THAT IS THE ONLY REFERENCE POINT YOU GET SO YOU MUST PAY
95 REM "CLOSE ATTENTION.
100 REM "WHEN YOU WANT A PRINTOUT JUST PRESS THE (HERE IS)
105 REM "KEY SEVERAL TIMES. YOU CAN ALSO ADD MORE TO YOUR
110 REM "PRINTOUT.
115 REM "IF YOU (BREAK) USE (GOTO2) TO RESTART.
120 REM "CHANGE THE END OF PROGRAM POINTER AT $A400 AND YOU CAN
125 REM "SAVE ON TAPE OR DISC.

```

```

0 REM      PROGRAM SUBMITTED BY CHUCK CLANCY TO ALLOW
1 5M      ROCKET PATROL TO BE PLAYED WITHOUT TURNING OFF THE MACHINE.
2 GF=48496: CALL 17846: GOTO 500
3 PRINT "LOADING MOVE ROUTINE"
4 FOR I=1 TO 41
5 READ A: POKE GF,A:GF=GF+1
6 NEXT I
10 CALL 17846
12 POKE 24578,38
15 PRINT "MOVING ROM TO RAM"
20 CALL 48500
45 PRINT "CHANGING VALUES---% A I T"
50 FOR I=1 TO 250
55 READ A,B
60 POKE A,B
65 NEXT I
70 CALL 17846
75 CALL 48506
80 DATA 64,0,176,0,254,189,114,182,64,0,167,0,8,255,189,114,254,189,128,8,255,1
89,128,140,72,0
92 DATA 38,232,286,64,0,255,189,128,286,176,0,255,189,2,57
100 DATA 45109,176,45118,83,45115,179,45126,176,45127,283,45129,179,45138,32
101 DATA 46203,178,46204,152,46622,191,46623,184
102 DATA 45137,177,45142,187,45149,187,45158,129,45159,177
104 DATA 45168,186,45169,254,45177,186,45178,255,45184,176,45185,185,45192,177,
45193,68
106 DATA 45225,179,45226,128,45228,177,45229,217,45233,177,45234,198
108 DATA 45318,177,45624,177,45625,152,45977,183,45978,131,45985,177,45986,68
110 DATA 45988,180,45989,178,45996,183,45997,148,46003,188,46004,127,46006,181,
46007,69
112 DATA 46031,183,46034,181,46060,183,46071,178
114 DATA 46074,182,46075,82,46077,183,46078,172,46080,178,46089,240,46112,182,4
6113,153
116 DATA 46126,188,46127,188,46159,183,46160,121,46179,134,46180,8,46181,189
117 DATA 46182,128,46183,207,46184,129,46185,8,46186,39,46187,249,46188,126,461
89,176,46190,8,46191,57
118 DATA 46203,178,46204,152,46222,178,46223,240,46251,177,46252,217,46269,177,
46270,198
120 DATA 46365,178,46366,118,46396,183,46397,156,46403,188,46404,127,46415,188,
46416,173
122 DATA 46428,181,46429,102,46434,182,46435,39,46439,181,46448,81,46483,182,46
484,124
124 DATA 46493,182,46494,124,46594,177,46595,47,46750,183,46751,121,46768,177,4
6769,29
126 DATA 46773,178,46774,240
499 STOP
500 PRINT "PROGRAM MOVES ROCKET PATROL"
505 PRINT "TO RAM AND CHANGES IT SO THAT"
510 PRINT "RESET NOT NEEDED FOR THE NEXT"
515 PRINT "GAME. WILL DISPLAY TILL A KEY"
520 PRINT "ON MAIN KEYBOARD IS PRESSED,"
525 PRINT "THEN RETURN TO SELECT SCREEN"
527 PRINT : PRINT : PRINT "PRESS RTN"
530 IF KEY$ (0)="" THEN 530
535 GOTO 3
600 INPUT A:B=A+28672
605 C= PEEK (A):D= PEEK (B)
610 IF C<>D THEN MUSIC "/10000000000000"
615 PRINT A,C,D,B
620 IF KEY$ (0)="" THEN 620
625 A=A+1:B=B+1: GOTO 605

```

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0 REM "KEYS FOLLOWS I HAVE HAD SEVERAL LETTERS WANTING"
1 REM "PROGRAMS WITH ERRORS IN THEM TO GIVE PEOPLE"
2 REM "PRACTICE IN DEBUGGING THEM. WELL HERE IS ONE"
3 REM "FOR YOU. IT WILL ONLY PRINT ONE MONTH AND"
4 REM "QUITS.... HAVE FUN..." EDITOR'
5 DIM D0$(7,3),N0(12),M0$(12,3)
10 DIM X$(1),A1$(1),M$(4),D1$(2)
15 REM CALENDAR MAKER
20 N=0:S0=0:L0=0:M1=7:M2=7:M4=1
25 FOR I=1 TO 7: READ D0$(I,1): NEXT
30 FOR I=1 TO 12: READ M0$(I,1),N0(I): NEXT
35 PRINT "ENTER THE FIRST MONTH AND YEAR TO BE PRINTED I.E., JAN,1980"
40 INPUT M9,Y1
45 PRINT "ENTER THE DAY OF THE WEEK THAT THE FIRST MONTH STARTS ON"
50 INPUT D1$
55 PRINT "ENTER THE NUMBER OF MONTHS TO BE PRINTED I.E., 10"
60 INPUT N
65 PRINT "DO YOU WANT PAGE ALIGNMENT (Y OR N)";
70 INPUT A1$
75 IF A1$<>"Y" THEN 90
80 PRINT "BEFORE THE PRINTING OF EACH MONTH A ? WILL APPEAR"
85 PRINT "ALIGN TO THE TOP OF PAGE BEFORE PRESSING THE RETURN"
90 FOR I=1 TO 12
95 IF M0<>M0$(I,1) THEN 105
100 M4=I
105 NEXT
110 FOR K=1 TO 7: IF D1$<>D0$(K,1) THEN 120
115 S0=K
120 NEXT
125 Z=M4+N-1
130 FOR I2=M4 TO Z
135 N0(2)=20
140 Y=Y1
145 IF INT (Y/4)<>Y/4 THEN 155
150 N0(2)=29
155 I0=0
160 M3=12
165 IF M3<=12 THEN 195
170 M3=M3-12
175 Y=Y1+1
180 IF INT (Y/4)<>Y/4 THEN 190
185 N0(2)=29
190 GOTO 165
195 IF S0=0 THEN 255
200 PRINT =1
205 GOSUB 290
210 FOR J=1 TO M2
215 GOSUB 335
220 IF N0(M3)<I0 THEN 250
225 GOSUB 365
230 GOSUB 495
235 GOSUB 495
240 L0=L0+1
245 NEXT J
250 REM
255 IF S0<>0 THEN 265
260 S0=1
265 NEXT I2

```

```

270 PRINT
275 PRINT
280 PRINT =0
285 STOP
290 REM
295 IF A1$(">Y" THEN 305
300 INPUT X$
305 PRINT : PRINT "
310 FOR I=1 TO 7
315 PRINT " "D0$(I,1); " "
320 NEXT
325 PRINT
330 RETURN
335 REM
340 FOR I=1 TO M1
345 PRINT "I-----";
350 NEXT
355 PRINT "I"
360 RETURN
365 REM
370 FOR I=1 TO M1
375 IF J<>1 THEN 390
380 IF I<>S0 THEN 390
385 I0=1
390 IF N0(M3)>=I0 THEN 410
395 PRINT "I "
400 I0=I0+1
405 GOTO 470
410 IF I0>9 THEN 450
415 IF I0<>0 THEN 430
420 PRINT "I "
425 GOTO 470
430 PRINT "I "I0;" "
435 I0=I0+1
440 S1=I+1
445 GOTO 470
450 PRINT "I "I0;" "
455 S1=I+1
460 I0=I0+1
465 S0=I+1
470 NEXT I
475 PRINT "I"
480 L0=0
485 S0=S1
490 RETURN
495 REM
500 FOR I=1 TO M1
505 PRINT "I "
510 NEXT I
515 PRINT "I"
520 RETURN
525 REM
530 DATA SUN,MON,TUE,WED,THU,FRI,SAT
535 DATA JAN,31,FEB,28,MAR,31,APR,30,MAY,31,JUN,30
540 DATA JUL,31,AUG,31,SEP,30,OCT,31,NOV,30,DEC,31
545 REM

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1 REM SUBMITTED BY LOUIS G. DOOLLEY
2 REM HERE IS A FANCY DIRECTORY PROGRAM FOR YOU
3 REM ** IM : ON CALL ** (L.DOOLY)
10 CALL 17046: POKE 40960,2: POKE 40961,0
20 PRINT TAB (8): "IM : ON CALL"
30 DIM N%(19,10),NT$(10),B%(10)
35 DIM B%(1),C%(1),D%(1),E%(10),F%(1)
40 L=7:C=0740:X=L*32+C+512
85 MUSIC "500000000001000000000000 500000100001000000000000 "
86 MUSIC "500001000003000000 500001000003000000 500001000003000000000000 "
87 MUSIC "10000003000050000000000000 10000000100000050000000000 "
88 MUSIC "500000000010000000000000": GOSUB 500
89 CALL 17046: PRINT "I AM GOING TO TAKE A NAP NOW, IF YOU NEED ME, PRESS SPA
CE BAR"
90 FOR K=1 TO 300
100 IF KEY$(0)=" " THEN 190
110 A=0:A=1: NEXT K:
140 FOR RK=1 TO 600
150 IF KEY$(0)=" " THEN 190
160 A=0:A=1: NEXT K: GOTO 89
190 MUSIC "5113450051545150 130131313130 11013011050 "
191 MUSIC "5413150051515450 15013011050 55550110": GOSUB 500
200 NT$=B%: CALL 17046
205 INPUT "YES, WHO CALLED? TYPE YOUR NAME,PLEASE",NT$: GOSUB 500: CALL 17046
210 FOTK=0 TO 19
220 N%(K,10)=NT$ THEN PRINT "HELLO, ";NT$: GOTO 280
230 NEXT K
240 : PRINT "I DON'T KNOW YOU, ";NT$;", TEELL ME MORE ABOUT YOURSELF, BEFORE I CA
N HELP YOU"
245 GOSUB 400: CALL 17046: POKE 40960,2:40961,0
250 INPUT "AGE, ",A: CALL 17006
251 PRINT : INPUT "BIRTHPLACE",B%: CALL 17006
252 PRINT : INPUT "HOBBY",C%:CALL17006
253 PRINT : INPUT "BEST FRIEND",D%: CALL 17006
254 PRINT : INPUT "FAVORITE CANDY",E%: CALL 17006
255 PRINT : INPUT "FAVORITE SINGER",F%: CALL 17006
260 PRINT : PRINT "OK, ";NT$;", THANKYOU!": GOSUB 400
270 Z=Z+1: IF Z>20 THEN PRINT "SORRRY, ";NT$;", I CAN'T HELP YOU, I HAVE NO MOR
RE FREE TIME": GOSUB 400: CALL 17026
275 N%(Z-1,10): CALL 17046
280 PRINT "WHAT CAN I DO FOR YOU, ";NT$;"?"
300 POKE 40960,2: POKE 40961,0: GOSUB 400: CALL 17046
320 PRINT "TYPE THE NUMBER OF ONE OF THESE": PRINT
331 PRINT TAB (5): "1. TYPING"
332 PRINT TAB (5): "2. GAME-PACK"
333 PRINT TAB (5): "3. MATH DRILLS"
334 PRINT TAB (5): "4. HOME FINANCE"
335 PRINT TAB (5): "5. HOME-MADE GAMES"
336 PRINT TAB (5): "6. PRACTICE PROGRAMMING"
337 PRINT TAB (5): "7. PHONEE COMMUNICATION"
338 PRINT TAB (5): "8. AUTOMATIC HOUSE CONTROL"
339 PRINT TAB (5): "9. APP NICE LIBRARY PROGRAMS"
340 PRINT : INPUT I
350 ON I GOTO 1000,2000,3000,4000,5000,6000,7000,8000,9000
400 FOR W=1 TO 200:A=0:A=1: NEXT W: RETURN
500 POKE 40960,X/256: POKE 40961,X- INT (X/256):256: RETURN
1000 CALL 17046: GOSUB 500
1010 PRINT "OF, ";NT$;", YOU NOW HAVE CONTROL, GO AHEAD.": STOP
2000 CALL 17046: GOSUB 500
2010 PRINT "TURN OF POWER AND INSERT DESIRED CARTRIDGE": STOP
3000 CALL 17046: GOSUB 500

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3010 PRINT "INSERT EDUCATION TAPE AND CLOAD AT COUNTER 000": STOP
4000 CALL 17046: GOSUB 500
4010 PRINT "INSERT HOME FINANCE TAPE AND CLOAD AT COUNTER 000": STOP
5000 CALL 17046: POKE 40960: POKE 40961,0
5010 PRINT "INSERT HOME-GAME TAPE AND CLOAD AT COUNTER FOR DESIRED GAME": PRINT
5021 PRINT TAB (5);"FIND ME": TAB (20);"000"
5022 PRINT TAB (5);"TARGET": TAB (20);"015"
5023 PRINT TAB (5);"SCREAMER": TAB (20);"030"
5024 PRINT TAB (5);"LANDFALL": TAB (20);"045"
5025 PRINT TAB (5);"COPY CAT": TAB (20);"060"
5026 PRINT TAB (5);"SKETCHER": TAB (20);"075"
5027 PRINT TAB (5);"MUCIAN": TAB (20);"090"
5028 PRINT TAB (5);"FIREWATCH": TAB (20);"105"
5030 STOP
6000 GOTO 1000
7000 CALL 17046: GOSUB 500
7010 PRINT "SORRY I DO NOT HAVE REQUIRED EQUIPMENT YET": GOSUB 400
7020 CALL 17026: CALL 17046: GOSUB 500: GOTO 80
8000 GOTO 7000
9000 CALL 17046: POKE 40960,2: POKE 40961,0
9010 PRINT "ADVANCE THIS TAPE AND CLOAD AT COUNTER FOR DESIRED PROGRAM:"
9015 GOSUB 400: PRINT
9021 PRINT TAB (5);"DICE": TAB (25);"120"
9022 PRINT TAB (5);"CRAPS": TAB (25);"030"
9023 PRINT TAB (5);"CLOCK": TAB (25);"225"
9024 PRINT TAB (5);"SNOOPY": TAB (25);"045"
9025 PRINT TAB (5);"CHECKBOOK": TAB (25);"060"
9026 PRINT TAB (5);"AMORYZATION": TAB (25);"195"
9027 PRINT TAB (5);"VAL EMULATOR": TAB (25);"105"
9028 PRINT TAB (5);"STR* EMULATOR": TAB (25);"090"
9029 PRINT TAB (5);"RAGING ROBOTS": TAB (25);"165"
9030 PRINT TAB (5);"SPELLING TUTOR": TAB (25);"150"
9031 PRINT TAB (5);"TRIG FUNCTIONS": TAB (25);"135"
9032 PRINT TAB (5);"NAME AND ADDRESS": TAB (25);"075"
9033 PRINT TAB (5);"SOMEWHERE NY LOVE": TAB (25);"210"
9034 PRINT TAB (5);"RUN FOR YOUR LIFE": TAB (25);"180"
9040 STOP
9999 END

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EM-1 (880712) (U)
PG 008 1400
SPRINGDALE
880712 72764

